



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/583,846

06/22/2006

Tatsuo Kataoka

1217-061641

6372

28289 7590 06/23/2009
THE WEBB LAW FIRM, P.C.
700 KOPPERS BUILDING
436 SEVENTH AVENUE
PITTSBURGH, PA 15219

EXAMINER

TRAN, THIEN F

ART UNIT

PAPER NUMBER

2895

MAIL DATE

DELIVERY MODE

06/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,846	Applicant(s) KATAOKA ET AL.	
	Examiner Thien F. Tran	Art Unit 2895	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/08/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-12 and 20 is/are rejected.
- 7) ☒ Claim(s) 2 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/02/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I including claims 1-12 and 20 in the reply filed on 04/08/2009 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7, 8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al (US 5,378,310) .

Satoh et al discloses a wiring board (Fig. 3E) having, on at least one surface of an insulating film (21), a wiring pattern (conductive pattern 20) comprising a base metal layer (23, 24) and a conductive metal layer (25) formed on the base metal layer, wherein: in a section of the wiring pattern, a width of a bottom of the conductive metal layer is smaller than a width of a top of the base metal layer.

Regarding claim 3, the base metal layer comprises an alloy or a laminate (23, 24) comprising two or more metals having different properties.

Regarding claim 4, the base metal layer is a layer (23) containing Cr.

Regarding claim 5, a sectional shape of the wiring pattern (20) has a stair formed by the base metal layer, and the stair of the base metal layer is formed so as to be

Art Unit: 2895

projected following a contour of the conductive metal layer around the wiring pattern composed of the conductive metal layer.

Regarding claim 7, an exposed surface of the base metal layer (23, 24) projected following a contour of the conductive metal layer (25) around the wiring pattern is coated with a concealing metal layer (26).

Regarding claim 8, the concealing metal layer (26) is a Cr layer.

It is noted that the claim limitation “plating” in claim 7 and claim 8 is taken to be a product by process limitation. A product by process claim directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al.*, 218 USPQ 289, 292 (Fed. Cir. 1983); and particularly *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process steps, which must be determined in a “product by process” claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

Regarding claim 12, the conductive metal layer (25) is formed on the base metal layer through a sputtering copper layer (24).

It is noted that the claim limitation “sputtering” in claim 12 is taken to be a product by process limitation. A product by process claim directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al.*, 218 USPQ 289, 292

Art Unit: 2895

(Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product “gleaned” from the process steps, which must be determined in a “product by process” claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old and obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. (US 5,378,310).

Regarding claims 9 and 10, Satoh et al as described above discloses a metal layer (26) on a whole surface of the wiring pattern (23, 24, 25) but does not disclose a solder resist layer formed thereon except on a terminal of the wiring pattern, and a second metal layer formed on the terminal. It is old and well known in the art to form a solder resist layer on the wiring pattern except on a terminal of the wiring pattern, and a second metal layer on the terminal. Therefore, forming a solder resist layer on the wiring pattern except on a terminal of the wiring pattern, and a second metal layer on the terminal would have been obvious modification.

Art Unit: 2895

Regarding claim 11, Satoh et al as described above does not disclose a solder resist layer formed on the wiring pattern except on a terminal of the wiring pattern, and a metal layer formed on the terminal exposed from the solder resist layer. It is known in the art to form a solder resist layer on the wiring pattern except on a terminal of the wiring and a metal layer on the terminal. Therefore, forming the solder resist layer on the wiring pattern except on a terminal of the wiring pattern, and a metal layer formed on the terminal exposed from the solder resist layer would have been prima facie obvious.

Regarding claim 20, Satoh et al does not expressly disclose the wiring board being used in a conventional circuit device comprising the printed wiring board (printed circuit board) and an electronic part mounted thereon. It would have been obvious to integrate the wiring board of Satoh et al in a conventional circuit device having a conventional chip mounted on the wiring board of Satoh et al in order to prevent copper being diffused in the polyimide insulating layer of the wiring board and to prevent decrease in the propagation speed of a signal transferred via the wiring pattern 20 and deterioration of the breakdown voltage.

Allowable Subject Matter

Claims 2 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, since the prior art does not teach the claimed limitations.

Conclusion

Art Unit: 2895

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien F. Tran whose telephone number is (571) 272-1665. The examiner can normally be reached on 7:30AM - 4:00PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew N. Richards can be reached on (571) 272-1736. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thien F Tran
Primary Examiner
Art Unit 2895

/Thien F Tran/
Primary Examiner, Art Unit 2895